RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____10/535, 523 A_____
Source: _____PCT_____
Date Processed by STIC: _____09/26/2005_____

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PCT

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          RAW SEQUENCE LISTING                    DATE: 09/26/2005
          PATENT APPLICATION:  US/10/535,523A     TIME: 12:50:39

          Input Set : D:\seq listing.app
          Output Set: N:\CRF4\09262005\J535523A.raw


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    5 <120> TITLE OF INVENTION: CELL LINES AND HOST NUCLEIC ACIDS RELATED TO INFECTIOUS
DISEASES
    7 <130> FILE REFERENCE: 6395-66741-06
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/535,523A
C--> 9 <141> CURRENT FILING DATE: 2005-05-17
    9 <150> PRIOR APPLICATION NUMBER: PCT/03/037143
   10 <151> PRIOR FILING DATE: 2003-11-18
   12 <150> PRIOR APPLICATION NUMBER: US 60/482,604
   13 <151> PRIOR FILING DATE: 2003-06-25
   15 <150> PRIOR APPLICATION NUMBER: US 60/427,464
   16 <151> PRIOR FILING DATE: 2002-11-18
   18 <160> NUMBER OF SEQ ID NOS: 845
   20 <170> SOFTWARE: PatentIn version 3.2
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   23 <211> LENGTH: 937
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   25 <213> ORGANISM: Homo sapiens
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   38 agacctaggg gagcatctca gcgtcactcg ctgtccagtt gctgtgatca ggtgctttgg    180
   40 ggtttgtgtg actccagaat ccactgggcc tgtgtgtcag aagacaaaag ttaaccataa    240
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   46 ggccacacag cagaggagcc tgaagcccat ggcaggatct cctagcttgg ggctggtgtc    420
   48 tctgtagtaa gcattctgaa gttcctaagc tcccttcttc ctgataggag cattgacctg    480
   50 tgatgtcacc acactgacat actttcccct gcaggccact ccagcccact gtactctttg    540
   52 gcaggcctca ggttctgcta ctccatgtac tattcctgtc ttgcacaggc cagaagctaa    600
   54 aggtgaggag gactgaacac agtaccaaca tacccacatc acaccttact ttcctctgcc    660
   56 cgccctgtcc ctgccctgac actgattccc cagcccttgc cacccagcc ccttcaccct     720
   58 ccactgcccg tgcagcagca gagacactcc ctccttgatg caaactgagg cctctggcac    780
   60 cccaactctt tcaaggcaat gatagtctgt gcttaactct acatggccag gcccccactc    840
   62 agggaattnc tgtgtgaaat tgttatccgc tgsacaattc cacacaacat ggnncgtcag    900
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   69 <212> TYPE: DNA
   70 <213> ORGANISM: Homo sapiens
   73 <220> FEATURE:
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(Cpg-61,7)

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      83 tatgcagtgc tgccataacc atgagtgata acactgcggc caacttactt ctgacaacga     180
      85 tcggaggacc gaaggagcta accgcttttt tgcacaacat gggggatcat gtaactcgcc     240
      87 ttgatcgttg ggaaccggag ctgaatgaag ccataccaaa cgacgagcgt gacaccacga     300
      89 tgcctgcagc aatggcaaca acgttgcgca aactattaac tggcgaacta cttactctag     360
      91 cttcccggca acaattaata gactggatgg aggcggataa agttgcagga ccacttctgc     420
      93 gctcggccct tccggctggc tggtttattg ctgataaatc tggagccggt gagcgtgggt     480
      95 ctcgcggtat cattgcagca ctggggccag atggtaagcc ctcccgtatc gtagttatct     540
      97 acacgacggg gagtcaggca actatggatg aacgaaatag acagatcgct gagataggtg     600
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     103 tctcttnngg atkgtcccag magytyccga mcatccccac tycccaacct tatgkggccc     780
     105 agcaatgans cctagtagta ggaaaatcty tatggatacy ggkgnctgak gggaarattc     840
     107 ttcytctcat gaarwgatgg kgactggggc tytgggatgc tcacgggaat ccctatttcc     900
     109 cccacaaaga agttatttta ttacacaacc atttggatga cccccttttt cttccaattn     960
     111 nccaaataaa tctgtaaagg tcacaggtga agttcttctc tttaagagct actccatgct    1020
     113 aagttcagcg agaacttggg gtaccctaga cattcttcca gagatgcttt tcttgtaact    1080
     115 cttttcaata agtaagcatg ctttgctctg cactgggtgt cacctgtgtt ggatgctgtt    1140
     117 gtccctgcct tgccctatat tctgtccaca tggtttcttc ataggatgat gcttaggtca    1200
     119 gccctgaggt ttgaaccagt caacaagtcc aggttggtgt ggagtccctt tagtacctcc    1260
     121 ctttgcagga ataatgctgc acccagaaac tccctcagag cctctccact gggaggggcc    1320
     123 ttgtgaccat tcctggttta ctcctcttgt tccagcatcc catgtggcca atgggcccct    1380
     125 ttcattttca atggtatctc anttnttaca gtaagttata ttattgccct acatngaact    1440
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     146 cgagttcttc tgagcgggac tctggggttc gaaatgagct agcccttaag taacgccatt     120
     148 ttgcaaggca tggaaaaata cataactgag aatagaaaag ttcagatcga ggtcaggaac     180
     150 agatggaaca gggtcgaccg gtcgaccggt cgaccctaga gaaccatcag atgtttccag     240
     152 ggtgccccaa ggacctgaaa tgaccctgtg ccttatttga actaaccaat cagttcgctt     300
     154 ctcgcttctg ttcgcgcgct tctgctcccc gagctcaata aaagagccca caacccctca     360
     156 ctcggggcgc cagtcctccg attgactgag tcgcccgggt acccgtgtat ccaataaacc     420
     158 ctcttgcagt tgcatccgac ttgtggtctc gctgttcctt gggagggtct cctctgagtg     480
     160 attgactacc cgtcagcggg ggtctttcac tctctgtgta ctggtaccaa cagagcctgg     540
     162 accagggcct ccagttcctc attcagtatt ataatggaga agagagagca aaaggaaaca     600
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        168 aacagttctt cgggccaggg acacggctca ccgtgctagg taagaagggg gctccagtgg     780
        170 gagagagggt gagcagccca ncctgnncga ccccanancc tgttnttagg ggagtggnca     840
        172 ctgggcatcc aggccctnct cnaggaancg ggttncgccn ggncc                      885
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        191 gaaaagcata ccccacagtg tcagtggagg caacatgggg tcctggattt cctcttcacc     180
        193 ctcagtggta gtgaggtgtt cctctcactc cttctgagta gaggaagcca agaggaaagc     240
        195 tggaacttgt accatcatcc agtggtgata aagcctctgt ccctccacct tacccccagg     300
        197 ttatcagtgg caaccacatg gctagtggta cccctcccgc tcctagccag aatgatatca     360
        199 gcagaggcct agagagtagc ccaaaaactc atctgcaccc agcaggactg aggtttccta     420
        201 cccccaccaa tggaagccaa gtgaggaacc taagccttca cctctcactc agcaggaacc     480
        203 agacaacacc ccctaacaca cacacacaca cacacacaca cacacccttc tgttagtgtg     540
        205 gtatcaagga ggcttgataa aatagaagat ttaaatagga tccattgccc ttatctcaaa     600
        207 ctcttattat gaaatcactc ccttgagaga gaaaaaagcc tttttctctt ggattgtccc     660
        209 agcagctccc gaccatcccc actccccaac cttatgtggc cccagcaatg agcctagtag     720
W--> 211 taggaaaatc tctatggata ctggtgctga tgggaagatt cttcctctca ngaagtgatg     780
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        221 <213> ORGANISM: Homo sapiens
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        227 <223> OTHER INFORMATION: n is a, g, c, or t
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        234 ctactccatg ctaagttcag cgagaacttg gggtacccta gacattcttc cagagatgct     180
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        242 tttagtacct ccctttgcag gaataatgct gcaccagaa actccctcag agcctctcca     420
        244 ctggaggggc cttgtgacca ttcctggttt actcctcttg ttccagcatc ccatgtggcc     480
        246 aatgggcccc tttcattttc aatggtatct caattcttac agtaagttat attattgccc     540
        248 tacatcgaac tcatcttttc tcagtgttac ctgaggaaga atggagagga tgcccagaat     600
        250 tggcccagaa gaatccactt cgattctaga gaaaaaggca ggtagaggca gaagagattc     660
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Output Set: **N:\CRF4\09262005\J535523A.raw**

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256 ggagcttgaa gctctctcca tctttgtcaa gtccctgga ctgagagggn aaaatnacat    840
258 ggcctttatc ctccagagga aantnattc                                     869
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277 tgcaaggcat ggaaaaatac ataactgaga atagaaaagt tcagatcgag gtcaggaaca   180
279 gatggaacag ggtcgaccgg tcgaccggtc gaccctagag aaccatcaga tgtttccagg   240
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285 tcggggcgcc agtcctccga ttgactgagt cgcccgggta cccgtgtatc caataaaccc   420
287 tcttgcagtt gcatccgact tgtggtctcg ctgttccttg ggagggtctc ctctgagtga   480
289 ttgactaccc gtcagcgggg gtctttcact ctctgtgtac tggtaccaac agagcctgga   540
291 ccagggcctc cagttcctca ttcagtatta taatggagaa gagagagcaa aaggaaacat   600
293 tcttgaacga ttctccgcac aacagttccc tgacttgcac tctgaactaa acctgagctc   660
295 tctggagctg ggggactcag ctttgtattt ctgtgccagc agcgtaggtg gtagcttgaa   720
297 acagttcttc gggccaggga cacggctcac cgtgctaggt aagaaggggg ctccaggtgg   780
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320 actccagaat ccactgggcc tgtgtgtcag aagacaaaag ttaaccataa ggcacagaag   180
322 aaagcctcct gctgaagcca tcgttggccc acatgcattt cagggacaag aaatgaagat   240
324 cggagacttt caagttgtgc ccaggactca cctgctccca ggagacaaaa ggccacacag   300
326 cagaggagcc tgaagcccat ggcaggatct cctagcttgg ggctggtgtc tctgtagtaa   360
328 gcattctgaa gttcctaagc tcccttcttc ctgataggag cattgacctg tgatgtcacc   420
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332 ggttctgcta ctccatgtac tattcctgtc ttgcacaggc cagaagctaa aggtgaggag   540
334 gactgaacac agtaccaaca tacccacatc acaccttact ttcctctgcc cgccctgtcc   600
336 ctgccctgac actgattccc cagcccttgc cacccagcc ccttcaccct ccactgcccg    660
338 tgcagcagca gagacactcc ctccttgatg caaactgagg cctctggcac cccaactctt   720
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        363 caggctagag tgcagtggca tgatcttggc tcactgcaac ctccacctcc caggttcaag    180
        365 tgattctctt gcctcagcct cccaagtagc tagtattaca gacgcctgcc accacgcccg    240
        367 gttaattttt gtacttttag tagagacagg tttcaccata ttggccaggc tggtctcaaa    300
        369 ctcctgacct caggtgatcc tcctgcctca gcctcccaaa gtgctgggat tacaggcatg    360
        371 agctaccacg tctggcctaa gtgcatgtta cctatactaa caaaaccaca cttctgcctc    420
        373 gaatgagaac agtctcctga acatcttgcc tctttgcctg actcaaagcc tcaggtctaa    480
        375 gcctccccat aatttctagt ctcagcagaa agatcaatga caggagactc tccaggtgat    540
        377 gaaattaacc aattaagtaa cctgggttgg catcctcccg tttgttcacc agctcacctn    600
        379 ctgccacagg tatatccttt ctctcancca tatatgcaca aacccctnc ccacggnaca    660
        381 catannaana atttggaaga ctanaaaatc aggcanggtn tancncacct tgngggctgg    720
        383 agtatggnan cctgggccgg nacatncata cattg                              755
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        387 <211> LENGTH: 839
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        400 accttcacta caaggatatt acaacaggac attttttaaa acctcaaaca tcaccaaaat    120
        402 ttctaagtgc aagtttattt ttattttttt ttttttttt gagacagagt ctcgctctgt    180
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        410 caaactcctg acctcaggtg atcctcctgc ctcagcctcc caaagtgctg ggattacagg    420
        412 catgagctac cacgtctggc ctaagtgcat gttacctata ctaacaaaac cacacttctg    480
        414 cctcgaatga gaacagtctc ctgaacatct tgcctctttg cctgactcaa agcctcaggt    540
        416 ctaagcctcc ccataatttc tagtctcagc agaaagatca atgacaggag actctccagg    600
        418 tgatgaaatt aaccaattaa gtaacctggg ttggcatcct cccgtttgtt caccagctca    660
        420 cctcctgcca caggtatatc ctttctctca gccatatatg cacaaacccc ctccccacgg    720
        422 cacacataga aanaatttgg aagactagaa aatcaggcna gggnttanca caccttngag    780
        424 ggctggagta tggnanccng ggnccgggan atncatncnn tngaaaactt gactatggg     839
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Input Set : **D:\seq listing.app**
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:2;  N Pos. 22,619,625,696,727,728,789,825,960,961,1402,1405,1435,1453
Seq#:2;  N Pos. 1463,1464,1474,1475,1486,1490,1492,1502,1514,1515
Seq#:3;  N Pos. 9,802,806,807,816,818,825,838,858,862,868,875,880,883
Seq#:4;  N Pos. 771,812,831,841,868,877,882,883,895
Seq#:5;  N Pos. 6,8,21,830,836,863,865
Seq#:6;  N Pos. 801,816,836,847
Seq#:7;  N Pos. 797
Seq#:8;  N Pos. 7,15,600,627,649,657,665,666,669,684,696,700,703,705,713,728
Seq#:8;  N Pos. 730,741,746
Seq#:9;  N Pos. 2,3,5,10,12,13,15,16,17,24,26,28,32,34,35,39,46,59,733,759
Seq#:9;  N Pos. 764,768,777,794,796,799,803,810,813,817,819,820,822
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Seq#:10; N Pos. 805,811,812,827,828
Seq#:11; N Pos. 9,10,26,39,684,689,694,697,700,703
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Seq#:13; N Pos. 11,27,29,606,635,646,651,653,657,660,667,677,681,682,689
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Seq#:13; N Pos. 740
Seq#:14; N Pos. 11,27,40,700,706,716,745,749,761,790
Seq#:15; N Pos. 7,11,14,19,72,652,656,659,666,667,668,681,682,693,695,698
Seq#:15; N Pos. 705,713,723,726,734,736,744,745,746,749,755,762,763,767,777
Seq#:15; N Pos. 782,784
Seq#:16; N Pos. 11,570,638,642,654,664,682,689,697,704,711,714,723,742,743
Seq#:16; N Pos. 754
Seq#:17; N Pos. 2,3,22,86,695,741
Seq#:18; N Pos. 7,8,636,693,710,736,748,750,756,762,764,769
Seq#:19; N Pos. 7,9,521,568,621,629,632,637,641,648,653,659,663,672,687,695
Seq#:19; N Pos. 709,712,715,721,733,739,745,747,758,759,763,764,766,768
Seq#:20; N Pos. 6,8,733,746,752,759,760,790,803,807,821,822,823,828,830,847
Seq#:20; N Pos. 848,856,860,861,869,872,874,876,881,882,895,912
Seq#:21; N Pos. 2,7,36,723,724,778,799,817,1461,1553,1586,1597,1599,1604
Seq#:22; N Pos. 8,22,712,798,837
Seq#:23; N Pos. 8,13,14,22,44,47,54,73,76,87,117,129,1519,1534,1539,1547
Seq#:23; N Pos. 1548,1550,1558,1560
Seq#:24; N Pos. 498,503,506,652,655,656,658,794,821,834,858,1335,1368,1375
Seq#:24; N Pos. 1402,1435,1437
Seq#:25; N Pos. 8,9,15,32,680,683,700,732,736,745,754,763,764,774,787,797
Seq#:25; N Pos. 800,805,809,814,815,816,819,830
Seq#:26; N Pos. 5,740,744,746,770,778,784,785,795,802,820,827,839,842,845
Seq#:26; N Pos. 852,854
Seq#:27; N Pos. 6,7,234,235,236,797,807,822,830,839,845,864,870,873
Seq#:28; N Pos. 3,9,13,16,17,18,19,20,21,24,27,30,31,32,33,34,39,43,47,49
Seq#:28; N Pos. 50,51,54,56,57,798,806,820,833,853,855,864,865,878,880,884
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

Seq#:28; N Pos. 885,891,894,900,901
Seq#:29; N Pos. 2,8,9,18,23,26,35,41,50,809,813,826
Seq#:30; N Pos. 2,3,4,14,18,19,20,27,28,29,31,32,34,38,41,48,49,50,65,72,85
Seq#:30; N Pos. 90,99,771,782,789,822,827,848,858,862,872,873,879,881,884
Seq#:30; N Pos. 885,888,889
Seq#:31; N Pos. 12,21,574,604,688,691,713,715
Seq#:32; N Pos. 6,250

<u>Invalid <213> Response:</u>
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:238,239,240,241

VERIFICATION SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: **US/10/535,523A**   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:34 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
M:341 Repeated in SeqNo=1
L:79 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
M:341 Repeated in SeqNo=2
L:144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:211 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:720
M:341 Repeated in SeqNo=4
L:230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
M:341 Repeated in SeqNo=5
L:299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:780
M:341 Repeated in SeqNo=6
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:780
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
M:341 Repeated in SeqNo=8
L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
M:341 Repeated in SeqNo=9
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
M:341 Repeated in SeqNo=10
L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
M:341 Repeated in SeqNo=11
L:517 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
M:341 Repeated in SeqNo=12
L:556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
M:341 Repeated in SeqNo=13
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
M:341 Repeated in SeqNo=14
L:636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
M:341 Repeated in SeqNo=15
L:677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
M:341 Repeated in SeqNo=16
L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
M:341 Repeated in SeqNo=17
L:757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
M:341 Repeated in SeqNo=18
L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
M:341 Repeated in SeqNo=19
L:835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
M:341 Repeated in SeqNo=20
L:880 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
M:341 Repeated in SeqNo=21
L:947 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
M:341 Repeated in SeqNo=22
L:990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
M:341 Repeated in SeqNo=23
L:1073 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:480

VERIFICATION SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: **US/10/535,523A**   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

M:341 Repeated in SeqNo=24
L:1120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
M:341 Repeated in SeqNo=25
L:1161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0